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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/939,626	08/28/2001	Eiichi Tamaki	50099-175	4531

7590 06/16/2006

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EXAMINER
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MILIA, MARK R

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 06/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/939,626

Applicant(s)

TAMAKI ET AL.

Examiner

Mark R. Milia

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 March 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8 is/are allowed.
- 6) ☒ Claim(s) 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Appeal Brief***

1. Applicant's Appeal Brief was received on 3/6/06 and has been entered and made of record. Currently, claims 1-9 are pending.

### ***Response to Arguments***

2. Applicant's arguments, see pages 5-7, filed 3/6/06, with respect to the rejection of claims 1-8 have been fully considered and are persuasive. Therefore, the finality of the Office Action dated 10/5/05 is withdrawn.

3. Applicant's arguments, see pages 5-7, filed 3/6/06, with respect to the rejection(s) of claim(s) 9 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the finality of the Office Action dated 10/5/05 is withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4060323 to Hirayama et al. in view of U.S. Patent No. 5453778 to Venkateswar et al.

Hirayama discloses an image recorder for recording an image on an image recording medium, comprising a photo-generator generating a beam subset composed of a plurality of light beams subjected to a same modulation (see abstract, column 5 lines 26-31, and claim 1), a focusing optical system focusing said beam subset on said image recording medium (see column 3 lines 34-38 and column 4 lines 35-42), and a scanning mechanism scanning said image recording medium with said light beam set, wherein said beam subset consists of said adjacent light beams (see column 5 lines 1-60).

Hirayama does not disclose expressly said beam subset is used to image a single pixel on said image recording medium.

Venkateswar discloses a photo-generator generating a beam subset composed of a plurality of light beams (see Fig. 1, column 2 lines 62-65, and column 4 lines 6-10, 23-25 and 37-60), a focusing optical system focusing said beam subset on said image

Art Unit: 2625

recording medium (see Fig. 1 (18) and column 4 lines 25-26 and 55-58), and whereby, said beam subset is used to image a single pixel on said image recording medium (see Figs. 1 and 2 and column 4 lines 41-59).

Hirayama & Venkateswar are combinable because they are from the same field of endeavor, image recording using spatial modulation and multi-dimensional scanning techniques.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the beam subset used to image a single pixel on the image recording medium, as described by Venkateswar, with the system of Hirayama.

The suggestion/motivation for doing so would have been to provide increased control of particular spatial light modulator elements which in turn increase the ability to control pixel intensity and allow for greater resolution (see column 3 lines 3-22, column 4 lines 15-22, and column 7 lines 12-32 of Venkateswar).

Therefore, it would have been obvious to combine Venkateswar with Hirayama to obtain the invention as specified in claim 9.

***Allowable Subject Matter***

5. Claims 1-8 are allowed.

6. The following is a statement of reasons for the indication of allowable subject matter:

The examiner believes it would not have been obvious to one of ordinary skill in the art at the time the invention was made to combine a plurality of light beams belonging to associated beam subsets that are synchronously modulated by a single image signal for a single pixel so that each pixel on the recording medium is recorded by a single beam subset, wherein the power density for recording each pixel is increased in response to the square of the number  $N$ , with the other limitations as set forth in the claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark R. Milia whose telephone number is (571) 272-7408. The examiner can normally be reached M-F 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler M. Lamb can be reached at (571) 272-7406. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2625

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mark R. Milia  
Examiner  
Art Unit 2625

MRM

A handwritten signature in black ink, appearing to read "Joseph R. Pokrzywa".

JOSEPH R. POKRZYWA  
PRIMARY EXAMINER